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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/840,089	05/06/2004	Siu-Kei Tin	03650.002462.	7853
5514	7590	11/06/2007	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			GE, YUZHEN	
30 ROCKEFELLER PLAZA			ART UNIT	PAPER NUMBER
NEW YORK, NY 10112			2624	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/840,089	TIN, SIU-KEI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Yuzhen Ge	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-33 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 06 May 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### *Drawings*

1. The drawings are objected to because in Fig. 3, one dotted line goes outside of the box and the meaning of the dotted line is not clear. Also the labels for the u' and v' axis are too small and barely legible. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The disclosure is objected to because of the following informalities: "luminance space" is not defined. Appropriate correction is required. The examiner will interpret it as the projection onto luminance axis.

***Claim Rejections - 35 USC § 102***

3. Claims 1-5, 11-16, 22-27 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al (US Patent 6,181,445).

Regarding claim 1, Lin et al teach a method of correcting a color value generated by a forward model for a color input device, comprising clipping the color value to a boundary of a visual gamut in a color space (Fig. 6A, col. 11, lines 31-44, col. 2, lines 10-24, the gamut 133 in Fig. 6A is a visual gamut).

Regarding claim 2, Lin et al teach the method of claim 1, wherein clipping the color value comprises:

clipping a luminance of the color value in a luminance space (Fig. 6B, point 144 is clipped to 145, point 141 to 142, col. 15, lines 46-61); and

clipping a chromaticity of the color value in a chromaticity space (Fig. 6A, the clipping is done on a two dimensional chromaticity of the color space).

Regarding claim 3, Lin et al teach the method of claim 2, further comprising clipping the luminance at a lower bound (Fig. 6B, point 141 to point 142, col. 15, lines 46-61, e.g. luminance levels from 0 to 40 are clipped to 30-40).

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Regarding claim 4, Lin et al teach the method of claim 3, wherein the luminance is allowed to exceed the luminance of a white point in the color space (col. 16, lines 8-31, the white point is specified by the threshold and the luminance is allowed to exceed the threshold value).

Regarding claim 5, Lin et al teach the method of claim 2, wherein clipping the color value further comprises:

determining at the clipped luminance a locus of the visual gamut on a chromaticity plane (Figs. 5A, 6A, 7 and 8 can be regarded as the locus of the visual gamut on a chromaticity plane, the luminance can be the clipped luminance, col. 16, lines 8-23);

determining a vector from a white point to the color value at the clipped luminance (Fig. 6A, the broken line can be regarded as the vector and the origin is the white point, col. 11, lines 39-44); and

clipping the chromaticity of the color value to an intersection of the vector and the locus (135 in Fig. 6A, col. 11, lines 39-44).

Regarding claim 11, Lin et al teach the method of claim 1, wherein the color space is CIELAB (Figs. 3B, 5A-8, col. 10, lines 19-49, col. 11, lines 39-53).

Claims 12-16, 22 and 23-27, 33 are the corresponding system and media claims of claims 1-5 and 11. Lin et al teach a system (Figs. 1 and 12, col. 5, lines 17-28) and a computer readable medium (col. 6, lines 21-41, Fig. 12). Thus Lin et al teach Claims 12-16, 22 and 23-27, 33 as evidently explained in the above-cited passages.

***Claim Rejections - 35 USC § 103***

4. Claims 6-10, 17-21 and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al (US Patent 6,181,445) in view of Beretta (US Patent 5,416,890).

Regarding claim 6, Lin et al teach the method of claim 2. However they do not explicitly teach wherein the boundary is the ISO standard CIE spectral locus on a chromaticity space. The CIE spectral locus can be considered as a gamut on a chromaticity space. Therefore the same method taught by Lin et al can be applied because the method of Lin et al does not constrain to any specific gamut. Beretta explicitly shows the ISO standard CIE spectral locus on a chromaticity space as a gamut or a subspace of a color space (Figs. 6-7 and 13-15A). It is desirable to reproduce color images (col. 1, lines 25-50 of Lin et al) and to broaden applications of the method taught by Lin et al to other gamut and it is desirable to have a system and method for color selection and color modification in the context of a uniform color model (col. 5, line 63-col. 6, line 40 of Beretta). Therefore it would have been obvious to one of ordinary skill in the art, at the time of invention, to apply the method of Lin et al to gamut whose boundary is the ISO standard CIE spectral locus on a chromaticity space as in the system and method of Beretta so that color selection and modification is done in a uniform color model.

Regarding claims 7, 8; 9, 10, Lin et al and Beretta teach the method of claims 1 and 6. However they do not explicitly teach wherein the chromaticity space is the CIE chromaticity xy plane/the CIE Uniform Chromaticity Scale (TICS) u'v' plane and the color space is CIEXYZ and CIELUV.

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Although Lin et al describe the method in CIELAB color space, the method can be applied to any color space or any independent color space such as CIEXYZ and CIELUV and the clipping method can be applied to any two dimensional space. Beretta further teach the CIE chromaticity xy plane/the CIE Uniform Chromaticity Scale (TICS) u'v' plane and color space CIEXYZ and CIELUV (col. 3, lines 21-32, Figs. 6-7 and 13-15A). It is desirable to broaden the application of the method of Lin et al and use an independent color space depending on the needs of the application. Therefore it would have been obvious to one of ordinary skill in the art, at the time of invention, to apply the method of Lin et al to the chromaticity space which is the CIE chromaticity xy plane/the CIE Uniform Chromaticity Scale (TICS) u'v' plane and to the color space which is CIEXYZ and CIELUV.

Claims 17-21 and 28-32 are the corresponding system and media claims of claims 6-10. Lin et al teach a system (Figs. 1 and 12, col. 5, lines 17-28) and a computer readable medium (col. 6, lines 21-41, Fig. 12). Thus Lin et al and Beretta teach Claims 17-21 and 28-32 as evidently explained in the above-cited passages.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuzhen Ge whose telephone number is 571-272 7636. The examiner can normally be reached on 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Yuzhen Ge  
Examiner  
Art Unit 2624

WENPENG CHEN  
PRIMARY EXAMINER

*Wenpeng Chen*  
3/28/07